MTBAUGDT

RoHS*



Vishay Custom Magnetics

Deliver MOSFET / IGBT gate power and timing

please see www.vishay.com/doc?99912

· Directly drive high side MOSFETs / IGBTs on busses up

Excellent rise time, overshoot, and peak current

• For lead (Pb)-free parts, please add "-LF" to the end of the

Material categorization: for definitions of compliance

This datasheet provides information about parts that are RoHS-compliant and / or parts that are non RoHS-compliant. For example, parts with lead (Pb) terminations are not RoHS-compliant. Please see the information / tables in this datasheet for details

Micro Gate Drive Transformers

FEATURES

to 200 V

characteristics

part number

Note

signals simultaneously



ABSOLUTE MAXIMUM RATINGS				
PARAMETER	CONDITIONS	LIMITS	UNITS	
Dielectric withstand voltage	Drive to gate, 1 min	1500	V _{DC}	
	Gate to gate, 1 min	500	V _{DC}	
Winding current	Any winding	100	mA _{RMS}	
Total power dissipation ⁽¹⁾		400	mW	
Operating temperature	Continuous	-55 to +130	°C	
Storage temperature	Continuous	-55 to +155	°C	
Frequency		125 to 750	kHz	
Size (L x W x H)		8.9 x 6.6 x 5.6	mm	
Terminals	Surface-mount			

Note

⁽¹⁾ Derate at 5 mW/°C above 25 °C

STANDARD ELECTRICAL SPECIFICATIONS INTERWINDING DC **RESISTANCE**⁽³⁾ CAPACITANCE USEFUL MAGNETIZING LEAKAGE DRIVE TRANSFER DRIVE GATE EXCITATION FREQ. INDUCTANCE INDUCTANCE PART NUMBER⁽¹⁾ SCHEMATIC RATIO DRIVE MIN. (µH) ⁽³⁾⁽⁴⁾ GATES то то RANGE MAX. MAX. (± 1 %)⁽²⁾ MAX. MAX. GATE GATE (nH) (5) (kHz) (V x µs) MAX. MAX. **(Ω)** (Ω) (pF) (pF) MTBAUGDT125050 125 to 500 1:0.5:0.5 63 330 500 2.0 0.7 60 30 А MTBAUGDT125075 500 2.0 125 to 500 1:0.75:0.75 66 360 2.0 60 30 A MTBAUGDT125100 125 to 500 1:1:1 63 330 500 20 2.0 160 160 А MTBAUGDT250101 250 to 750 1000 0.65 1:1 25.8 350 1.0 75 n/a В MTBAUGDT250102 250 to 750 264 300 95 1:1:1 22.4 1.5 1.5 95 A 1500 В MTBAUGDT250251 250 to 750 30.6 473 1.5 0.3 25 2.5:1 n/a MTBAUGDT250252 250 to 750 2.5:1:1 23.8 300 900 1.8 0.3 27 27 А

Notes

⁽¹⁾ For lead (Pb)-free parts, please add "-LF" to the end of the part number

(2) Drive: gate or drive : gate : gate

(3) $T_A = 25 \ ^{\circ}C$

 $^{\left(4\right) }$ Small signal measurement across the drive winding with both gates open

⁽⁵⁾ Small signal measurement a across the drive winding with both gates shorted

(6) Derate at 5 mW/°C above 25 °C

Revision: 20-Aug-2021

1

THIS DOCUMENT IS SUBJECT TO CHANGE WITHOUT NOTICE. THE PRODUCTS DESCRIBED HEREIN AND THIS DOCUMENT ARE SUBJECT TO SPECIFIC DISCLAIMERS, SET FORTH AT www.vishav.com/doc?91000

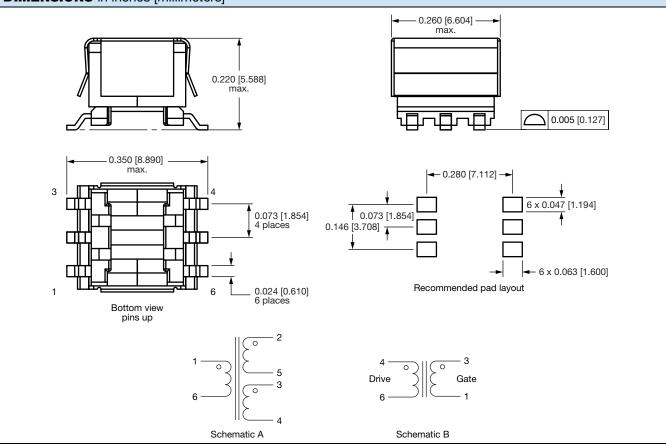


www.vishay.com

MTBAUGDT

Vishay Custom Magnetics

DIMENSIONS in inches [millimeters]



TAPE AND REEL SPECIFICATIONS				
$H \rightarrow T \qquad P_1 \rightarrow P_1 \rightarrow P_1 \rightarrow P_0 \rightarrow P_$				
PARAMETER	SYMBOL	DIMENSIONS inches [mm]		
Tape width	W	0.630 [16.0]		
Component pitch	Р	0.315 [8.0]		
Indexing pitch	P ₀	0.157 [4.0]		
Index-to-component offset	P ₁	0.079 [2.0]		
Pocket height	Н	0.213 [5.4]		
Tape thickness	Т	0.012 [0.3]		
Reel overall diameter	OD	13.0 [330]		
Reel axle diameter	AD	0.5 [13]		
Reel capacity	Qty	1000/reel		

Revision: 20-Aug-2021

2

Document Number: 34567

For technical questions, contact: <u>magnetics@vishay.com</u> THIS DOCUMENT IS SUBJECT TO CHANGE WITHOUT NOTICE. THE PRODUCTS DESCRIBED HEREIN AND THIS DOCUMENT ARE SUBJECT TO SPECIFIC DISCLAIMERS, SET FORTH AT <u>www.vishay.com/doc?91000</u>



Vishay

Disclaimer

ALL PRODUCT, PRODUCT SPECIFICATIONS AND DATA ARE SUBJECT TO CHANGE WITHOUT NOTICE TO IMPROVE RELIABILITY, FUNCTION OR DESIGN OR OTHERWISE.

Vishay Intertechnology, Inc., its affiliates, agents, and employees, and all persons acting on its or their behalf (collectively, "Vishay"), disclaim any and all liability for any errors, inaccuracies or incompleteness contained in any datasheet or in any other disclosure relating to any product.

Vishay makes no warranty, representation or guarantee regarding the suitability of the products for any particular purpose or the continuing production of any product. To the maximum extent permitted by applicable law, Vishay disclaims (i) any and all liability arising out of the application or use of any product, (ii) any and all liability, including without limitation special, consequential or incidental damages, and (iii) any and all implied warranties, including warranties of fitness for particular purpose, non-infringement and merchantability.

Statements regarding the suitability of products for certain types of applications are based on Vishay's knowledge of typical requirements that are often placed on Vishay products in generic applications. Such statements are not binding statements about the suitability of products for a particular application. It is the customer's responsibility to validate that a particular product with the properties described in the product specification is suitable for use in a particular application. Parameters provided in datasheets and / or specifications may vary in different applications and performance may vary over time. All operating parameters, including typical parameters, must be validated for each customer application by the customer's technical experts. Product specifications do not expand or otherwise modify Vishay's terms and conditions of purchase, including but not limited to the warranty expressed therein.

Hyperlinks included in this datasheet may direct users to third-party websites. These links are provided as a convenience and for informational purposes only. Inclusion of these hyperlinks does not constitute an endorsement or an approval by Vishay of any of the products, services or opinions of the corporation, organization or individual associated with the third-party website. Vishay disclaims any and all liability and bears no responsibility for the accuracy, legality or content of the third-party website or for that of subsequent links.

Except as expressly indicated in writing, Vishay products are not designed for use in medical, life-saving, or life-sustaining applications or for any other application in which the failure of the Vishay product could result in personal injury or death. Customers using or selling Vishay products not expressly indicated for use in such applications do so at their own risk. Please contact authorized Vishay personnel to obtain written terms and conditions regarding products designed for such applications.

No license, express or implied, by estoppel or otherwise, to any intellectual property rights is granted by this document or by any conduct of Vishay. Product names and markings noted herein may be trademarks of their respective owners.